

ZUKAYANTS, Sarkis Avanesovich; IVANAYEV, Miliy Ivanovich; LEBEDEV,
Valentin Georgiyavich; ZELEVICH, P.M., inzh., red.; KHITROV,
P.A., tekhn.red.

[Underground construction; a follow-up on materials published
abroad] Stroitel'stvo podzemnykh sooruzhenii (po materialam
zarubezhnogo opyta). Moskva, Gos.transp.zhel-dor.izd-vo,
1959. 86 p. (MIRA 12:3)

(Underground construction)

LEBEDEV, V.G. (Moskva)

Calculating rigid closed frames. Stroi. mekh. i rasch. soor. 2 no.5:
39-43 '60. (MIRA 13:9)

(Structural frames)

LEBEDEV, V G

PHASE I BOOK EXPLOITATION

1001

- p. 4
- Opyt ekspluatatsii vysokovol'tnykh setey Mosenergo' sbornik statey (Operating Experience of the Mosenergo High-voltage Networks, Collection of Articles) Moscow, Gosenergoizdat, 1957, 79 p. 4,000 copies printed.

Gen. Ed.: Klement'yev, D.P., and Baumshteyn, I.A.; Ed.: Alekseyev, S.V.; Tech. Ed.: Medvedev, L.Ya.

PURPOSE: This collection of articles is intended for engineers and technicians engaged in the operation and repair of high-voltage equipment of power systems. It may also be useful to designers of H-V installations.

COVERAGE: The reports are the result of experience gained in the operation, preventive maintenance, repair and development of electrical equipment in substations and H-V networks. They also contain the first account of the application of telemechanics in network regions of Mosenergo (Moscow Regional Power System Administration). There are no references.

Card 1/7

1001

Operating Experience (Cont.)

TABLE OF CONTENTS:

Introduction

3

Smirnov, V. S., Engineer. Improvement in the Construction of 110-kv Air Circuit Breakers Made in the USSR
The author states that frequent failures in circuit breaker operation occur in Soviet H-V networks, and in the Mosenergo network in particular, because of the faulty construction of these breakers, owing to the lack of pneumatic blocking and poor control arrangement. These two defects were corrected in 1955 in the Mosenergo H-V network.

5

Trukhmanov, I. S., Engineer. Operating Experience With Air Compressor Units of Substations Equipped With Air Circuit Breakers

12

The author describes 3 types of air compressor units produced for the last 7 years by Mosenergo. He lists all defects of these compressors and makes recommendations for their removal.

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Operating Experience (Cont.)

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Yurenkov, V. D., Candidate of Technical Sciences. Experience in Preventive Maintenance and the Use of Insulation for Equipment in 220-kv Substations 22
The author describes the methods employed in preventive testing of separate pieces of equipment at one of the 220-kv Mosenergo substations. This substation was equipped with apparatus of foreign make and put into operation in 1949. The author sums up the experience gained and enumerates the defects of insulation and the methods employed to improve operating conditions.

Korolev, A. I., Engineer. Testing the Insulation of Secondary Circuits With Stepped-up D-C and A-C Voltages 31
The author presents the results of tests carried out by the Mosenergo H-V Laboratory and compares the two methods employed: 1,000 volts a-c and 2,000 volts d-c for 1 minute. He finds that test voltages may be stepped up to 1500 volts a-c and 2,500 volts d-c.

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Operating Experience (Cont.)

1001

Borukhman, V. A., and Lebedev, V. G., [Deceased], Engineers.
Experience in Substation Telemechanization in Areas of
the Mosenergo H-V Network
Mosenergo has recently telemechanized 3 regional H-V
networks comprising 21 substations. The authors describe
the level of telemechanization achieved and discuss
problems connected with the telemechanization of
synchronous condensers. They describe the basic com-
ponents required for telemechanization and explain their
operation.

33

Kuznetsov, A. I., Engineer. Experience in the Use of Storage
Batteries

38

The author considers the present set of instructions con-
cerning the operation and maintenance of storage batteries
to be out of date and suggests that they be rewritten on
the basis of experience gained in this field. He suggests
changing the procedure for charging storage batteries,
replacing the inadequate mercury are rectifiers of the URV-1
and URV-3 types and improving the operating conditions of
the batteries.

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Operating Experience (Cont.)

1001

Aptov, I. S., Engineer. Regeneration of Transformer Oil Having High Dielectric Losses 49
The author claims that in recent years cases of quality deterioration of transformer oil have been observed in Soviet electric power systems. This deterioration is due to an increase of the dielectric loss-angle of oil. He describes the percolation method of regenerating transformer oil and compares the results obtained with the results of other methods.

Aptov, I.S., Engineer. Quantitative Determination of Low-Molecular Water-Soluble Acids Contained in Transformer Oil 51
The author briefly describes the above method.

Yakobson, I. A., Engineer. New Pressed Line Connectors 52
The author lists the disadvantages of conventional line connectors (flat PP-type and oval, made by Armset'). He describes the new "pressed" type of connector produced by Mosenergo and the portable MGP-3 hydraulic press

Card 5/7

Operating Experience (Cont.)

1001

suitable for splicing wires from 16 sq. mm. to 240 sq. mm.
He explains in detail the procedure for splicing conductors by this method.

Grinev, S. M., Engineer. Safety Factors for Conductor Strength During Repairs 60
The author gives data based on experience and on official recommendations.

Vinokurov, L. V., Engineer. Vibration of Wire and Stranded Cable Transmission Lines and Control Measures 62
The author explains the advantages of a new type of antivibration device, the so-called "vibration absorber", and compares it with the old types. The 7-year trial period of 90,000 vibration absorbers of the type described proved their superiority.

Yurenkov, V. D., Candidate of Technical Sciences, and Yakobson, I. A., Engineer. Safety Illumination of High Supporting Structures for H-V Transmission Lines 65

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Operating Experience (Cont.)

1001

The authors describe methods of illuminating supporting structures so as to comply with safety regulations of the USSR Civil Air Fleet. They also discuss the calculation, construction, installation and maintenance of the lighting arrangements.

Yurikov, P. A., Engineer. Measures for Protecting Transmission Line Crossings Against Atmospheric Overvoltages
The author explains the regulations and how they should be applied in practice.

75

Batkhon, I. S., Engineer. Calculation of Forces Required for Lifting Supporting Structures by the Nomographic Method
The author explains the theory of this method and its practical application.

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AVAILABLE: Library of Congress

JP/nah
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Card 7/7

KULIKOV, A.G., red.; LEBEDEV, V.G., red.; KUDRYAVTSEV, S.P., red.;
VORONINA, N.V., red.; KOKOSHKO, A.G., red.; NAUMOV, K.M.,
tekhn. red.

[Development of socialist industry at the present-day stage;
industrial management] Razvitie sotsialisticheskoi promysh-
lennosti na sovremennom etape; o khoziaistvennom rukovodstve.
Moskva, Izd-vo VPSH i AON, 1962. 257 p. (MIRA 15:6)

1. Moscow. Akademiya obshchestvennykh nauk.
(Industrial management)

KUZ'MINOV, I.I., prof., red.; LEBEDEV, V.G., kand. ekon. nauk, red.;
SMOLDYREV, D.A., , red.; KOKOSHKO, A.G., red.; NAUMOV, K.M.,
tekhn. red.

[Developing economic theory in the light of the decisions of
the 22d Congress of the CPSU] Razvitie ekonomicheskoi teorii
v svete reshenii XXII s"ezda KPSS. Pod red. Kuz'minova, I.I.,
Lebedeva, V.G., Smoldyreva, D.A. Moskva: Izd-vo VPSH i AON,
1962. 249 p. (MIRA 15:11)

1. Moscow. Akademiya obshchestvennykh nauk. 2. Akademiya ob-
shchestvennykh nauk, Moscow (for Kuz'minov, Lebedev).
(Economics)

LEBEDEV, Viktor Georgiyevich; MATSUK, R.V., red.; NAUMOV, K.M.,
tekhn. red.

[On the path to the communist management of production]
Na putiakh k kommunisticheskomu upravleniiu proizvodstvom.
Moskva, Izd-vo VPSH i AON pri TsK KOSS, 1963. 63 p.
(MIRA 16:7)

(Industrial management)

LEBEDEV, Viktor Georgiyevich; MATSUK, R.V., red.; NAUMOV, K.M.,
tekhn. red.

[Toward the communist form of industrial management] Na putiakh
k kommunisticheskomu upravleniiu proizvodstvom. Moskva, Izd-vo
VPSH i AON pri TsK KPSS, 1963. 63 p. (MIRA 16:6)
(Industrial management)

LEBEDEV, Viktor Georgiyevich; ZONOV, S.K., retsenzent; KOCHETOV,
I.M., red.izd-va; MATLYUK, R.M., tekhn. red.

[Growth potentials for labor productivity in the copper
industry] Rezervy rosta proizvoditel'nosti truda v mednoi
promyshlennosti. Moskva, Metallurgizdat, 1963. 110 p.
(MIRA 16:7)

(Copper industry--Labor productivity)

LEBEDEV, V. G.

U S S R .

The rheological properties of hydrocarbon lubricants and greases. V. G. Lebedev and G. V. Vinogradov. *Kolloid. Zhur.* 17, 38-45 (1955); *cf. C.A.* 48, 12512d. —Homogeneous solns. of ceresin or synthetic paraffin wax in viscous petroleum oils are thixotropic. Their modulus of shear (I) and yield point (II) vary only slightly with the viscosity of the oil. Ceresin solns. show only slight temp. effects for I and II. The apparent viscosity of the solns. decreases when the velocity gradient increases but is almost independent when the latter is $>400 \text{ sec.}^{-1}$. Also in *Colloid J. (U.S.S.R.)* 17, 35-9 (1955) (Engl. translation). J. J. Bikerman

Lebedev, V. G.

Study of plastic disperso systems in a uniform state of tension. G. V. Vinogradov, V. G. Lebedev, and V. A. Protod'yakova (Military Academy, Antaresk-Pank Troops, Moscow). *Khokh. Zhur.* 18, 633 (1975). 4 p. 49, 1431112 - A coaxial-cylinder apparatus is used in the rotation of the inner cylinder by 0.002° can be measured when a torque is applied to the external cylinder. The stress-strain curves for polymers of different degrees of crystallinity and also of the dependence of the yield stress on the thickness of the dispersion layers were obtained. The results were greater for greater thicknesses of the layers. The layers adjacent to the surface of the inner cylinder are the most deformed.

LEBEDEV, V. G.

1523. PROPERTIES OF PARAFFINIC LUBRICANTS AT LOW TEMPERATURES.
Vinogradov, O.V. and Lebedev, V.G. (Khim. Tekhnol. Topliva (Chem. Technol.
Fuel, Moscow), 1956, (3), 54-58; abstr. in Ref. Zh. Khim. (Ref. J. Chem.,
Moscow), 1956, (22), 72732). The elastic-plastic and viscosity
characteristics of lubricants containing solid paraffins were examined in a
special rotation device with ribbed and smooth cylinders.

S/081/61/000/021/075/094
B138/B101

AUTHORS: Vishnyakov, V. A., Lebedev, V. G.

TITLE: Abrasive wear of rolling-contact bearings in the presence of
a lubricant

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 406, abstract
21M120 (Tr. 3-y konferentsii po treniyu i iznosu v mashinakh, M.,
AN SSSR, v. 3, 1960, 198 - 201)

TEXT: The influence of the nature and properties of a lubricant on the
process of abrasive wear has been investigated for the case of rolling-
contact bearings. The test stand used consisted of the ordinary boss of
the track bogie (rotation transmitted from the engine) of a caterpillar
vehicle with roller and ball bearings. Plastic grease (Solidol) and
mineral oil with a viscosity of 16 centistokes at 100°C were used for the
test, and the abrasive was natural dust containing up to 80% quartz. The
influence of the nature of the lubricant on abrasive wear in rolling-
contact bearings was found to be due to sedimentation effect. This is not
possible with greases but may occur in oil suspensions. There was

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Abrasive wear of rolling-contact...

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considerably less wear with the oil than with the grease. A study of the kinetics of abrasive wear in rolling-contact bearings shows that it takes place at a diminishing rate and almost ceases after a certain period of time (10 - 15 min. in the experiments). This is because the large particles are broken up (to about 2μ in size) and then cease to have any abrasive effect. [Abstracter's note: Complete translation.] ✓

Card 2/2

AUTHORS: Tronev, V. G., Lebedev, V. G. SOV/78-3-10-8/35

TITLE: The Synthesis of the Compounds of Germanium Tetrachloride With Some Nitrogenous Addenda (Sintez soydineniy tetrakhlorida germaniya s nekotorymi azotsoderzhashchimi addendami)

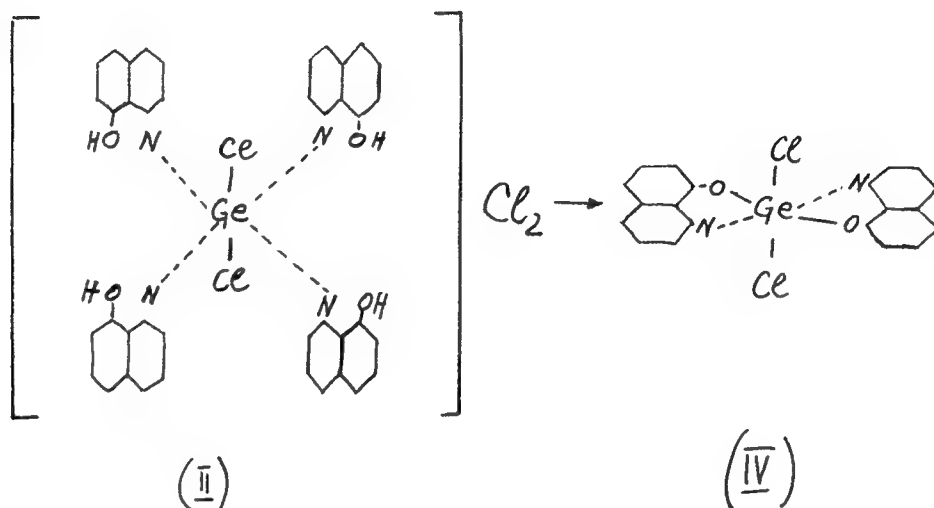
PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 10, pp 2272-2275 (USSR)

ABSTRACT: The synthesis of GeCl_4 with oxyquinoline, pyridine and ethylene diamine was carried out. The compounds have the following formulae:
 $\text{GeCl}_4 \cdot 4 \text{C}_2\text{H}_8\text{N}_2$ (I), $\text{GeCl}_4 \cdot 4 \text{C}_9\text{H}_7\text{NO}$ (II), $\text{GeCl}_4 \cdot 2 \text{C}_5\text{H}_5\text{N}$ (III).
 The compound $\text{GeCl}_2(\text{C}_9\text{H}_6\text{NO})_2$ (IV) is produced in the pyrolysis of the compound $\text{GeCl}_4 \cdot 4 \text{C}_9\text{H}_7\text{NO}$. The compound $\text{GeCl}_2(\text{C}_9\text{H}_6\text{NO})_2 \cdot 2\text{NH}_3$ (V) is produced in the interaction of $\text{GeCl}_2(\text{C}_9\text{H}_6\text{NO})_2$ with dry, gaseous ammonia at a temperature of 100°C .
 The coordination structure of the above-mentioned compounds was indicated:

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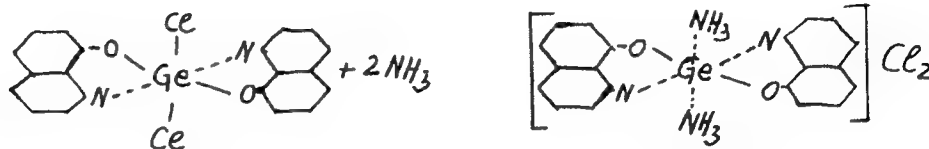
The Synthesis of the Compounds of Germanium Tetrachloride With Some Nitrogenous Addenda



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SOY/78-3-10-8/35

The Synthesis of the Compounds of Germanium Tetrachloride With Some Nitrogenous Addenda



There are 1 table and 7 references, 1 of which is Soviet.

SUBMITTED: May 16, 1958

Card 3/3

5.2620

1209, 1273, 1282

86490
S/078/60/005/008/023/031/XX
B023/B066

AUTHORS: Lebedev, V. G., Tronev, V. G.

TITLE: Complex Compounds of Germanium Halides With Pyridine,
2,2'-Dipyridyl, and 1,10-Phenanthroline

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 8,
pp. 1725-1729

TEXT: The authors studied germanium tetrahalide compounds with hetero-
cyclic amines, viz., pyridine, 2,2'-dipyridyl, and 1,10-phenanthroline.
The amino compounds were synthesized as follows: To dissolve the organic
amine in anhydrous CCl_4 (concentration ~ 0.05 mole), such an amount of
germanium halide solution (in the same solvent) was added that the ratio
of amine : metal was 1.2-1.3 for 1,10-phenanthroline, 1.2-1.3 for
2,2'-dipyridyl, and 2.4-2.5 for pyridine. The mixture was caused to
boil for 1/2 hour under dry conditions. It was then cooled down, and
sucked off on a porous glass filter. The precipitate was washed out on the
filter with dry CCl_4 , then with a small amount of absolute benzene and

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Complex Compounds of Germanium Halides With Pyridine, 2,2'-Dipyridyl, and 1,10-Phenanthroline
 86190
 S/078/60/005/008/023/031/XX
 B023/B066

sulfuric ether. The rest of the solvent was put into a vacuum at normal temperature. The solid phase was brought to a constant weight. The yield was 90% referred to germanium, 80% to pyridine, and less to bromides. The resultant substances form white, finely crystalline powders which are hydrolyzable in humid air. These complex compounds might belong to the coordination compounds of the $\text{GeH}_4 \cdot 2\text{A}$ type (H - halogen Cl or Br,

A - pyridine, 1/2'-dipyridyl, 1/2 1,10-phenanthroline). The authors further determined the molecular weight of the complex chlorides (Table 2) which proved to be monomeric. The system GeCl_4 -phenanthroline was studied in

chloroform solution by the optical method. The formation of a $\text{GeCl}_4 \cdot \text{C}_{12}\text{H}_8\text{N}_2$ compound was also consistent with the analytical data. The

thermal stability was studied with Kurnakov's pyrometer. The heating curves of these substances usually show one or two endothermic effects (Fig. 3, Table 3). A regular change of the thermal stability of GeCl_4 and

GeBr_4 compounds with amines was observed. A. O. Alekseyeva and Chugayev are mentioned. There are 3 figures, 3 tables, and 9 references: 5 Soviet.

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86130

Complex Compounds of Germanium Halides With Pyridine, 2,2'-Dipyridyl, and 1,10-Phenanthroline

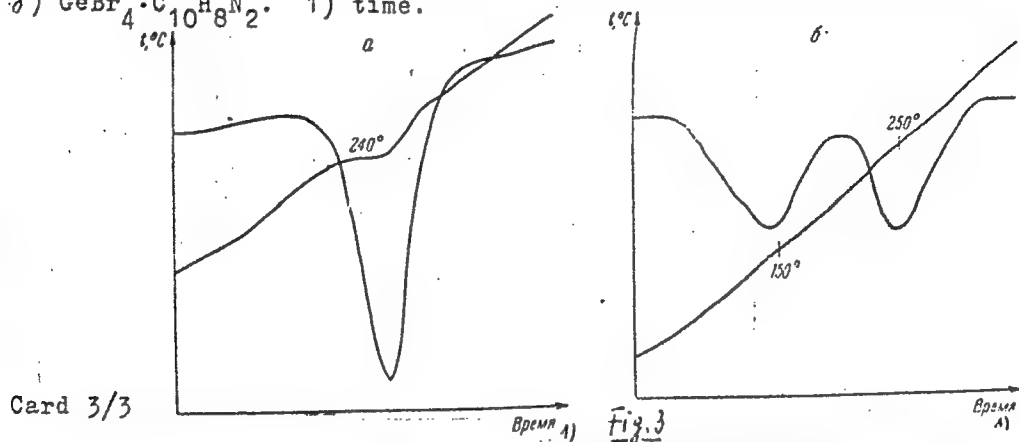
5/078/60/005/009/023/031/XX
BC23/BC66

2 British, and 2 German.

SUBMITTED: July 15, 1959

Legend to Fig. 3: Thermograms of the compounds: a) $\text{GeCl}_4 \cdot \text{C}_{10}\text{H}_8\text{N}_2$

б) $\text{GeBr}_4 \cdot \text{C}_{10}\text{H}_8\text{N}_2$. 1) time.



LEBEDEV, V.G.; TRONEV, V.G.

Compounds of germanium halides with o-hydroxyquinoline. Zhur.
neorg. khim. 5 no. 12:2849-2850 D '60. (MIRA 13:12)
(Germanium compounds) (Quinolinol)

LEBEDEV, V. G.

Cand Chem Sci - (diss) "Study of compounds of germanium with several heterocyclic amines." Moscow, 1961. 12 pp with diagrams; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow State Univ imeni M. V. Lomonosov); 150 copies; price not given; (KL, 6-61 sup, 198)

ACCESSION NR: AP4029846

S/0279/64/000/002/0192/0192

AUTHOR: Lebedev, V. G.

TITLE: General meeting of the department of physical chemistry and technology of inorganic materials of the Academy of Sciences SSSR

SOURCE: AN 888R. Izv. Metallurgiya i gornoye delo, no. 2, 1964, 192

TOPIC TAGS: mechanical engineering, glass, inorganic chemistry

ABSTRACT: The author lists the various papers presented on the 6th and 7th of January 1964. The reports are entitled: Novy*ye materialy* dlya khimicheskogo mashinostroyeniya (new materials for chemical mechanical engineering) by G. O. Terzyan; O primeneni titana v khimicheskom mashinostroyenii (on the use of titanium in chemical mechanical engineering) by N. P. Sazhin; Perspektivy* ispol'zovaniya stekla i steklokristallicheskich materialov v khimicheskoy promy*shlennosti (perspective of using glass and glass-crystalline materials in chemical industry) by N. A. Toropov; Vy*sokodispersny*ye stoykiye konstruktsionny*ye materialy* dlya khimicheskoy apparatury* (highly dispersion-resistant construction materials for chemical equipment) by P. A. Revinder; Novy*ye materialy* dlya atomnoy tekhniki

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ACCESSION NR: AP4029846

(new materials for atomic technology) by V. S. Yemel'yanov; Nekotory*ya itogi i perspektivy* organizatsii nauchny*kh issledovaniy po fiziko-khimii i tekhnologii neorganicheskikh materialov (some sums and perspectives of the organization of scientific research on physical chemistry and technology of inorganic materials) by N. M. Zhavoronkoy.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 30Apr64

ENCL: 00

SUB CODE: ML, IE

NO REF SOV: 000

OTHER: 000

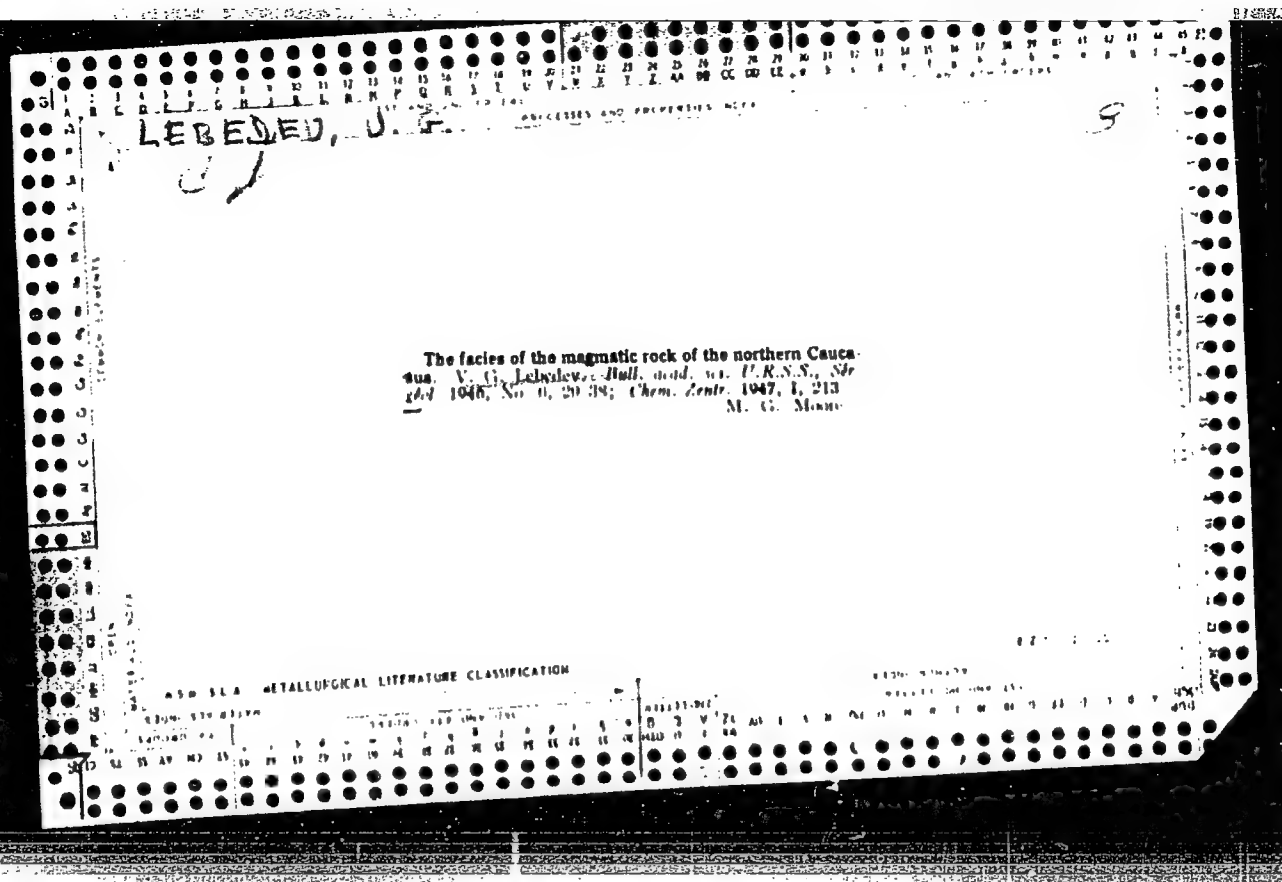
Card 2/2

W. J. V. J.

General meeting of the American Chemical Society, Division of Inorganic Materials, at the University of California, San Diego, U.S.A., Dec. 14-15, 1964. (J. Am. Chem. Soc. 86, 1964, 5511-5512)

LEBEDEV, V.G., Kand.khim.nauk

Problems in the control of processes of chemical technology: joint
session of three departments. Vest. AN SSSR no. 53-54 S '64.
(MIRA 17:10)



LEBEDEV, V.G.

River ice as a relief-forming factor. Izv.Vses.geog. ob-va 88
no.1:85-87 Ja-F '56. (MLRA 9:6)
(Ice on rivers, lakes, etc.)

LEBEDEV, V.G.; KHAN' MO-KAN' [Han Mo-k'an].

~~First All-China Conference on Quaternary Geology. Izv. AN SSSR. Ser.~~
geog. no.4:102-113 J1-Ag '57. (MIRA 11:1)
(Peiping--Geology, Stratigraphic--Congresses)

LEBEDEV, V. G.

Dept. Geology and Geography, Peking University

"Some Vital Tasks and Problems in Chinese Geomorphology"

K'o-hsueh T'ung-pao (Scientia), June 1958

LEBEDEV, V.G.

Role of latest tectonic movements in the formation of the
relief of Shansi. Nauch.dokl.vys.shkoly; geol.-geog.nauki
no.2:34-45 '59. (MIRA 12:8)

1. Chernovitskiy universitet, geograficheskiy fakul'tet,
kafedra fizicheskoy geografii i geomorfologii.
(Shansi--Geology, Structural)

3(5)

307/10-7, -2-6/29

AUTHOR: Lebedev V.G.

TITLE: The Connection of the Present Relief of the West-Siberian Lowlands With the Mesocenozoic Tectonics

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya, 1959, Nr 2, pp 58-66 (USSR)

ABSTRACT: This article concerns the connection of the mountain forming processes in South Siberia with the development of the relief of the "quiet" flat sections of the Siberian platform. According to the scientist V.V. Belousov (1954) this platform can be divided into two sections - an "activated" section and another "not activated" during the process of alpine movements of the earth's crust. On the basis of this conception, the author carries out his investigation, which can be summarized in the following conclusions. 1) Within the borders of the "not activated" section of the alpine plat-

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SCN/10-59-1-0/10

The Connection of the Present Relief of the West-Siberian Lowlands with the Mesozoic Tectonics

form in West Siberia, the tectonic movements of the mesozoic era appeared prevalently in the form of gently sloping elevations and depressions complicated by secondary elevations and depressions; sometimes, faults. Each of these tectonic structures is characterized by its own relief type. 2) The south-eastern margin of the West-Siberian lowlands is subjected to the considerable influence of processes, which developed in the bordering activated sections of the platform. This finds its expression in the rather complicated orohydrographic plan of the margin lands, where two distinctly-marked directions prevail. Towards the north-west the influence of the activation process on the relief gradually decreases. 3) According to the development of the individual structures, the surface relief changed within their boundaries, as a result

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The Connection of the Present Relief of the West-Siberian Lowlands With the Mesozoic Tectonics.

of which the single stages of this development are still reflected in a no relief forms of the relief. As such may be considered the old channels of the formerly north-east - south-west directed water discharge. The tectonic development of the structures lead sometimes to a basic rebuilding of the relief and also affected the direction of the surface water discharge. The author refers to the following scientists: V.V. Belousov (already mentioned), V.G. Lebedev, F.G. Gurari, K.I. Nagorniy, I.A. Ragonin, V.G. Vasil'yev, V.N. Saks, N.P. Ruzayev, S.V. Sudkov. There are 2 maps and 14 Soviet references.

ASSOCIATION: Chernovitskiy gosudarstvennyy universitet (Chernovitsy State University)

Card 3/3

LEBEDEV, V.G.

Principal morphological and structural features in the central
part of the Asian continent. Dokl. Ak. SSSR 132 no.4:899-902
Je '60. (MIRA 13:5)

1. Chernovitskiy gosudarstvennyy universitet. Predstavleno
akademikom I.P.Gerasimovym.
(Asia--Geology, Structural)

LEBEDEV, V.G.

Principles of geomorphological zoning. Vest. Mosk. un. Ser.5:
Geog. no.2:48-52 Mr-Apr '61. (MIRA 14:4)

1. Geograficheskiy fakul'tet, Saratovskiy universitet.
(Physical geography)

LEBEDEV, V.G.

Recent tectonic movements in North China. Geol.sbor. [Lvov] no.
7/8:335-348 '61. (MIRA 14:12)

1. Gosudarstvennyy universitet, Chernovtsy.
(China--Geology, Structural)

LEBEDEV, V.G.

Origin of the Hwang-Ho River great curve. Izv. Vses. geog. ob-va
93 no.6:518-522 N-D '61. (MIRA 15:1)
(Yellow Valley--Geomorphology)

LEBEDEV, V.G., dekan

Geographical Faculty of the Saratov University. Vest.Mosk. un.
Ser. 5: Geog. 17 no.2:70-73 Mr-Apr '62. (MIRA 15:5)

1. Geograficheskiy fakul'tet Saratovskogo universiteta imeni
Chernyshevskogo.
(Saratov--Geography--Study and teaching)

BIEHANOVA, Mariya Ivanovna; LEEFEDEV, V.G., nauchn. red.

[Material stimuli for speeding up technical progress in industry] Material'nye stimuly uskoreniia tekhnicheskogo progressa v promyshlennosti. Moskva, Mysl', 1964. 87 p.
(MIRA 18:5)

KULIKOV, A G., red.; LEBEDEV, V.G., red.; RAZUMOV, N.A., red.;
CHEREDNICHENKO, A.P., red.

[Economic problems of accelerating technological progress
in industry] Ekonomicheskie problemy uskoronija tekhnicheskogo progressa v promyshlennosti. Moskva, Mysl', 1964.
277 p. (MIRA 18:4)

1. Akademiya obshchestvennykh nauk (for Lebedev, Cherednichenko).
2. Nachal'nik tekhnicheskogo upravleniya Soveta narodnogo khozyaystva Moskovskogo gorodskogo ekonomicheskogo rayona (for Razumov).

L 32598-66 EWP(e)/EWT(m)/EWP(w)/ETC(f)/ENG(m)/EMA(d)/T/EWP(t) IJP(c) RIM/JD/
ACC NR: AP5018618 WH/JG/JT/WH SOURCE CODE: UR/0030/65/000/007/0087/0089

AUTHOR: Lebedev, V. G. (Candidate of chemical sciences)

ORG: none

TITLE: Some problems in material science

SOURCE: AN SSSR. Vestnik, no. 7, 1965, 87-89

TOPIC TAGS: heat resistant material, scientific conference, crack propagation, ductility, sintering, creep, glass, bending strength, protective coating, metal vapor deposition, electron beam, oxide ceramic, refractory compound, hydrofluoric acid

ABSTRACT: The Scientific Council on "Physicochemical fundamentals of creating new, inorganic, heat-resistant materials" of the Academy of Sciences USSR held its regular session 9-12 March 1965. Several important problems of material science were on the agenda, among them the problem of superstrength materials. Two ways of solving this problem were discussed: the creation of new superstrength materials or the development of special treatments for existing materials.

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Composites which appear to be the most promising new superstrength materials were subjects of reports by S. Z. Bokshteyn, S. T. Kishkin, and I. L. Svetlov; V. S. Ivanova, I. M. Kop'yev, and L. M. Ustinov; and N. K. Rybal'chenko, M. Yu. Bal'shin, O. B. Belyavskaya, O. V. Padalko, and I. P. Eskin. Composites consisting of relatively soft matrix and high-strength fibers have the best strength indices because of high ductility and high resistance to crack propagation. Whiskers of brittle nonmetals and compounds, such as graphite, aluminum oxide, aluminum nitride, and silicon oxide, appear to be the best type of strengthening fibers. The room-temperature strength of whisker-base materials is 100—200% higher and the ratio of tensile strength to specific gravity is 10 times higher than those of modern alloys. At high temperatures, the difference will be even more pronounced. However, many complex problems must be solved before whisker-base composites can be produced in quantity, among them a theory of the strengthening effect of the whiskers, a method ensuring an ordered and uniform distribution of the whiskers in the composites, and a method ensuring a reliable bond between whiskers and matrix.

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Some interesting results were obtained with so-called "metal felt," which consists of metal fibers (thin wires) whose length is at least one or two orders greater than the diameter. The felt can be formed into blanks or billets which are then sintered at a temperature lower than the melting point of the main part of the felt.

Reports of L. K. Gordienko, F. F. Vitman, T. I. Sogolova, V. A. Kargin, and V. M. Amonenko dealt with special treatments of available metallic and nonmetallic materials. It was shown that the heat resistance of metallic materials can be significantly increased by so-called mechanothermal treatment (not to be confused with the thermomechanical treatment), in which mechanical energy applied to a metal is absorbed uniformly by the whole metal volume. This results in a peculiar dislocation structure possessing a high creep strength. Further progress in the direction of improving the heat resistance of existing materials by a controlled dislocation structure will depend on the development of a theory of the super-strength state and of scientifically sound methods for attaining such a state for a given combination of temperature and stress.

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ACC NR: AP5018618

6 9
The bend strength of glass can be increased to 250—300 kg/mm² by pickling in a solution of hydrofluoric acid, but such a strength can be reached only in a sound glass which has no surface defects. Since defects may originate very easily, a method of protecting the glass surface against any accidental damage is urgently needed.

18 21
18 Oxidation-resistant coatings were the subject of the reports by B. A. Movchan, V. Ye. Ivanov, Ye. P. Nechiporenko, and V. M. Amonenko. Protective coatings with properties which can be varied in a fairly wide range can be obtained by vacuum vapor deposition of aluminum oxide, zirconium oxide, or chromium with an electron beam as the heat source. Silicide coatings produced by vacuum vapor deposition are greatly superior to those obtained by conventional methods. Thin films of a plastic metal deposited on polycrystalline molybdenum improve the ductility of the latter by 20—30%. 18

Physicochemical theories of heat resistance and high-temperature properties of materials were discussed in the reports of D. N. Poluboyari-

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ACC no: AP000015

nov, Ye. B. Lulin, G. V. Samsonov, I. V. Solomin, A. I. Leonov, 23
P. Ya. Bokin, A. I. Korelova, Ye. M. Savitskiy, G. S. Burkhanov,
Ch. V. Kopetskiy, V. F. Terekhova, and T. A. Sidorov.

Modern technology requires structural materials capable of operating at high temperatures under high stresses. Lately, parts made of refractory materials, such as pure-oxide ceramics, have found a wide field of application. The Institute of Chemical Engineering im. D. I. Mendeleev in Moscow has developed special equipment including vacuum furnaces for research at temperatures of 2000—2500C. Important properties of pure-oxide ceramics, such as strength at room and elevated temperatures, creep behavior, the coefficient of thermal expansion, the evaporation rate, and the heat conductivity, have been determined.

G. V. Samsonov made an interesting attempt to establish a relationship between the electron structure and physicochemical properties of refractory compounds of transition metals with nonmetals and semimetals, specifically boron, carbon, nitrogen, oxygen, aluminum, silicon, phosphorus, sulfur,
27 selenium, and tellurium. 27 27 27 27 27

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L 32598-66

ACC NR: AP5018618

Application of the principles and ideas discussed at the session will assist
in determining directions for future research and will help in developing
refractory compounds with specifically required properties. [FSB: v. 2, no. 3]

SUB CODE: 11, 20, 13 / SUBM DATE: none

Card 6/6 BK.

LEBEDEV, V.I.

Gasoline resistant enamels for automotive fuel tanks. Avt.trakt.
no.1:23-26 Ja '55. (MLRA 8:4)

1. Gor'kovskiy avtozavod im. Molotova.
(Automobiles--Fuel systems) (Enamel and enameling)

LEBEDEV, V. I.

PHASE I BOOK EXPLANATION NOV/5161

25(1)

Nauchno-tekhnicheskoye obshchestvo mashinostroyeniya i promyshlennosti, Kiyevskoye obshchestvo prevladya

Zashchita i dekorativnyye i spetsialnyye pokrytiya metallov (Protective, Decorative, and Special Coatings for Metals) Litov, Minsk, 1959. 291 p. 4,200 copies printed.

Editorial Board: P. K. Litovskiy, B. I. Litovskiy, and A. P. Zychis (Mosp. Ed.) Ed. of Publishing House: M. S. Sorokin; Chief Ed. (Southern Division, Minsk): V. K. Sedyuk, Engineer.

PURPOSE: This book is intended for technical personnel in the field of protective coatings for metals.

CONTENTS: The papers in this collection, presented at a conference of the NTO (National Technical Office) held in October 1958, deal with the mechanization and acceleration of metal-coating and painting processes performed by spraying, electrolytic, and other methods. Quality control of protective coatings is also discussed. References are mentioned. References follow several of the papers.

PERSONALITIES ARE MENTIONED: V. K. Sedyuk, Engineer. 174

Ruplasev, Z. P., Engineer (Moscow). White Bronze Plating and Electropolishing of Copper Alloys as a Substitute for Silver Plating 178

Endriyevskiy, M. T. Selection of Coatings for Clamping Terminals of Electrical-Installation Equipment 186

Matyushonok, S. S., Engineer (Leningrad). Instrument for Controlling the Thickness of Electroplating During the Process of Imposition 191

Yofe, I. S., Engineer (Moscow). Photoelectrochemical Method of Engraving Iron and Steel Plates for Machines and Instruments 198

Borodina, M. S., Engineer (Moscow). Aluminizing of Steel Reflectors by Spraying with Aluminum in Vacuum 202

Malayev, P. P. Candidate of Chemical Sciences (Moscow). Technological Achievements and Improvements in Equipment Design Made by NIIKhim during the Fifth Five-Year Plan in the Field of Chemical and Electrolytic Treatment of Metals 208

Medorov, V. A., Engineer (Leningrad). Mechanization and Acceleration of Electroplating Processes 233

Ratner, E. G., Engineer (Gorkiy). Present State and Fields of Application for Electrostatic Painting in the Machine-Building Industry 239

Gubenskiy, V. A., Engineer (Moscow). Painting of Products in a High-Voltage Electric Field 243

Lebedev, V. I., Engineer (Gorkiy). Introduction of New Painting Materials and Methods at the Gorkiy Armored Car Plant 259

Mushkin, G. R., Engineer (Leningrad). Rapid Drying of Paint and Lacquer Coats Through Application of Commercial-Frequency Currents 271

Livshits, M. M., Engineer (Moscow). Automated Painting, Enameling, and Glazing of Deeply Recessed Products by Electrostatic Spraying 284

Derezhko, G., Candidate of Technical Sciences (Moscow). Painting of Industrial Products in France

LEBEDEV V. I.

Lebedev, V. I.

and. Tech. Sci.

Dissertation: "Selection of the shape of through eccentrics for making calico-type fabrics on automatic machines AIS-5." 14 Apr 49

Moscow Textile Inst.

SO Vecheryaya Moskva
Sum 71

LEBEDEV, V.I.

NIKITIN, M.G., dotsent; LEBEDEV, V.I., assistant.

Field study on the action of tuberculin prepared on a synthetic culture medium. Sbor. trud. Khar'. vet. inst. 22:259-267 '54.
(MLRA 9:12)

1. Kafedra epizootologii Khar'kovskogo veterinarnogo instituta.
(Bacteriology--Cultures and culture media)
(Tuberculin)

LEEDEEV, V. I.

LEEDEEV, V. I.: "An experiment in restoring the health of kolkhoz cattle farms suffering from tuberculosis, based on enlarged kolkhozes." Min Higher Education USSR. Khar'kov Veterinary Inst. Khar'kov, 1956. (Dissertations for the Degree of Candidate in Veterinary Science).

SO: Knizhnaya Letopis' No. 22, 1956

PALLADOV, Sergey Semenovich, dotsent; LEBEDEV, Viktor Ivanovich; GRANOVSKAYA,
I.E., red.; SUDAK, D.M., tekhn.red.

[Fabrics, clothing, rugs] Tkani, shveinye tovary, kovry. Moskva,
Gos.izd-vo torg.lit-ry, 1959. 344 p. (MIRA 12:3)
(Rugs) (Clothing and dress) (Textile industry)

LEBEDEV, V.I.

Concerning N.Kh.Urazov's article "Classification of weaving patterns."
Izv.vys.ucheb.zav.; tekhn.tekst.prom. no.1:88-90 '63.
(MIRA 16:4)

1. Yaroslavskiy tekhnologicheskii institut.
(Weaving)

LEBEDEV, V.I.

The "polished" iceberg. Inform. biul. Sov. antark. eksp. no.26:45-
47 '61. (MIRA 14:7)

(Antarctic regions—Icebergs)

LEBEDEV, V.I.
LEBEDEV, V.I. (Kronshtadt)

Hypnosis for treating functional enuresis in adults. Urologiia 22
no.4:53-55 J1-Ag '57. (MIRA 10:10)

(ENURESIS, therapy,
hypnosis, in adults (Rus))
(HYPNOSIS, therapeutic use,
enuresis in adults (Rus))

DURNOV, L.A., kand. med. nauk; LEBEDEV, V.I.

Reanimation of an 8-day-old child after a 10 minute period of clinical death. Khirurgia 39 no.9:127-128 S'63 (MIRA 17:3)

1. Iz khirurgicheskogo otdeleniya imeni Krasnobayeva (zav. - doktor med. nauk I.E.Sandukovskiy) 1-y Detskoy moskovskoy gorodskoy klinicheskoy bol'nitsy (glavnyy vrach - zasluzhennyy vrach RSFSR Ye.P. Prokhorovich).

LEBEDEV, V.I.

Experience in the use of the phage titer growth reaction in epidemiological practice. Zhur. Mikrobiol., epid. i immun. 40 no.12:29-33 D '63.
(MIRA 17:12)

1. Iz I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

LEBEDEV, V.I.

Some problems in the epidemiology of dysentery in pediatric institutions.
Zhur. mikrobiol., epid. i imm. 41 no. 2:134-138 F '64. (MIRA 17:9)

1. I Moskovskiy ordena Lenina meditsinskiy institut imeni Sechenova.

BONDARENKO, N.A., inzh.; RATNER, A.M., inzh.; SOKOLOV, K.A., inzh.;
GURANOV, N.P., inzh.; SCRIN, N.M., inzh.; TARAKANOV, G.P., inzh.;
IVANOV, S.M., inzh.; NIREK, A.D., inzh.; ROVLAKH, S.Ye., kand.tekhn.
nauk; FILIPPOV, V.V., inzh.; KHAYKIS, L.B., kand.tekhn.nauk;
LEBEDEV, V.I., inzh.; VELICHKIN, Ye.A., inzh., red.; KHITROV, P.A.,
tekhn.red.

[Handbook for mechanics of a construction project] Spravochnik
mekhanika stroitel'nogo uchastka. Pod red. K.A.Sokolova. Moskva,
Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshchenia, 1960.
619 p. (MIRA 14:3)

(Mechanical engineering) (Road machinery)
(Railroads--Construction)

LEBEDEV, Vasilii Ivanovich; SARGIN, Yu.N., red.; BILENKO, I.S.,
red.izd-va; FOMICHEV, P.M., tekhn.red.

[Local building materials; a practical manual] Vestnye
stroitel'nye materialy; prakticheskoe posobie. Moskva,
Izd-vo TSentrsoiuzna, 1961. 98 p. (MIRA 15:2)
(Building materials)

OSIPOV, Mikhail Ivanovich; SEDOV, Aleksandr Pavlovich; LEBEDEV, V.I.,
nauchnyy red.; ROGAL'SKAYA, L.I., red.; MIKHAL'CHUK, Z.V.,
red.; BARANOVA, N.N., tekhn. red.

[Instruction in special masonry techniques] Prepodavanie spe-
tsial'noi tekhnologii kamennykh rabot. Moskva, Proftekhizdat,
1962. 153 p. (MIRA 15:11)
(Masonry--Study and teaching)

LEBEDEV, V. I.

Compensation method of stabilizing oscillator amplitudes. Sbor. nauch.
rab. MIFI no. 9:109-120 '55. (MIRA 10:1)
(Oscillators, Electron-tube)

Lebedev, V.I.
~~LEBEDEV, V.I.~~ kand. tekhn. nauk.

High-speed multipliers for instantaneous values of shifting voltages.
Zbor. nauch. rab. MIFI no.12:77-91 '57. (MLRA 10:11)
(Electronic analog computers)

LEBEDEV, V. I.

© Е. Камушкин

Периодический процесс в полупроводниковых диодах при протекании через него в течение короткого промежутка тока малой длительности

Л. С. Бурган

Приближенный метод расчета переключения процесса в полупроводниковых трубах при больших сигналах

Я. Д. Зарин

Исследование работы плоскостного полупроводникового транзистора с затвором при различных уровнях сигнала

М. А. Бир

Определение сопротивления в диодных структурах полупроводниковых приборов

С. А. Гаринин

Полупроводниковые приборы с отрицательным сопротивлением и их применение в радиотехнических схемах

19 июня

(с 10 до 16 часов)

Совместное заседание с секцией электронно-вычислительной техники.

11

В. И. Громов

Демонстрационный трестер на полупроводниковых приборах

А. Ю. Горюнов

Е. Б. Гольдштейн

Е. И. Зорин

Г. В. Катальков

В. А. Казанков

Специальные заготовки цифровых вычислительных машин на полупроводниковых приборах

Л. Н. Петрович

Т. М. Алексеев

Н. С. Борова

В. А. Гребенков

В. И. Копылов

В. И. Лебедев

А. Т. Филиппов

Ю. И. Фост

Краткие полупроводниковые заготовки и узлы цифровой вычислительной техники

В. И. Косов

Фронт выкладки микросхем и транзисторов элементов с общим эмиттером с учетом температурной стабильности

12

report submitted for the Commemorial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications in A. S. Popov (YKREK), Moscow, 8-12 June, 1959

LEBEDEV

V. I.

В. А. Гребенко,
В. Н. Косов,
В. Н. Лебедев,
А. Г. Филатов,
Ю. Н. Фет.

Конспект мультимедийного магнетона и упрощенной цифровой вычислительной машины

10 июня

(с 18 до 22 часов)

А. А. Косов

Методы расчета устройств на ферритовых сердечниках

Ю. Н. Шеню

Основы расчета вычислительных систем, содержащих ферритовые сердечники с прямоугольными петлями гистерезиса

Н. В. Корольков

В. С. Гаврилов

Быстродействующие магнитные элементы вращательного типа

А. А. Гусев

О расчете цепи на биполярных транзисторах

64

11 июня
(с 10 до 15 часов)

Л. Н. Заволожко

Счетчики на ферритовых сердечниках

В. А. Мамкин

Применение элементов ферритовых ретрансляторов в качестве элементов в схемах автоматизации и телемеханики

Н. В. Корольков

Магнитный ферритовый элемент для питания магнитных элементов

С. М. Забелю

В. А. Шеню

Трифонный вычислительный элемент системы счета для вычислительной машины на ферритах

11 июня
(с 18 до 22 часов)

В. Н. Шеню

Защитные цепи для цифровых машин для счета

65

report submitted for the Centennial Meeting of the Scientific Technological Society of
Radio Engineering and Electrical Communications in: A. S. Poyov (VCHIN), Moscow,
8-12 June. 1959

LEBEDEV, V.I.

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p 4

PHASE I BOOK EXPLOITATION

SOV/1778

Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlennosti. Moskovskoye pravleniye

Tranzistornaya elektronika v priborostroyenii; sbornik trudov konferentsii (Transistor Electronics in the Instrument-making Industry; Collection of Conference Transactions) Moscow, Oborongiz, 1959. 289 p. 1,400 copies printed.

Ed.: N.I. Chistyakov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: S.D. Khametova; Tech Ed.: V.P. Rozhin; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: The book is intended for scientific and engineering personnel of the instrument-making and radio industries engaged in the development of electronic and radio equipment.

COVERAGE: The authors of this collection of articles discuss the theory, principle of operation, calculation and application of electronic circuits using transistors. They also

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Transistor Electronics (Cont.)

SOV/1778

describe transistor application in measuring circuits, computers, radio and automatic and remote control circuits. The book is based on transactions of the Scientific and Engineering Conference organized by NTO in Moscow in December 1956. The conference discussed 54 papers on thermistors, photocells, thermocouples, cooling elements, nonlinear capacitors, crystal diodes, and transistors. A considerable number of these papers have been included in the present book. No personalities are mentioned. References appear at the end of each article.

TABLE OF CONTENTS:

Foreword

3

O.G. Yagodin, Candidate of Technical Sciences. Determination of Point-contact Transistor Parameters Under Dynamic Conditions

5

The author discusses the operation and characteristics of transistors and describes methods of obtaining their parameters. Particular attention is given to the operation of a transistor amplifier with regenerative

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Transistor Electronics (Cont.)

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feedback. Operation of circuits used for experimentally determining transistor parameters is also discussed. There are 4 references of which 2 are Soviet, and 2 English

N.K. Povarov, Candidate of Technical Sciences. Electronic Devices Fed by Current Generators 25

The author describes the static and dynamic characteristics of nonlinear elements and discusses their equivalent circuits. He also describes the operation and characteristics of vacuum phototubes, vacuum-tube amplifiers, transistors, cascade amplifiers, and oscillators connected to a current generator. There are 8 references of which 7 are Soviet and 1 English.

V. Ya. Sutyagin, Engineer. Average-current Transistor Amplifiers 39

The author discusses the operation and characteristics

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9(3)

SOV/142-2-1-11/22

AUTHOR:

Lebedev, V.I.

TITLE:

Restoration of Pulsed Voltage Direct Component in
the Case of Transformer Coupling (Vosstanovleniye
postoyannoy sostavlyayushchey impul'snogo naprya-
zheniya pri transformatornoy svyazi)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy - radiotekh-
nika, 1959, Vol 2, Nr 1, pp 86-93 (USSR)

ABSTRACT:

The author investigates problems connected with the regeneration of the direct component of a pulse voltage, transmitted by a transformer. The regeneration is achieved by a diode, connected in series with the load. He established that the regeneration is most effective when a current generator serves as an input signal source. The regeneration is less effective, when the signal source is a current generator only during the time interval and when its internal resistance is of a small value during the pulse. The regeneration of the direct component is impossible when the pulse voltage source is a volt-

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SOV/142-2-1-11/22

Restoration of Pulsed Voltage Direct Component in the Case
of Transformer Coupling

age generator. The application of a diode discriminator circuit is desirable for eliminating false pulses. However, in this case the regeneration will be effective only under the condition that the discriminator circuit resistance is greater than the load resistance. In case the application of a regeneration diode is ineffective, the transformer inductance must be reduced to a permissible magnitude in respect to pulse peak transmission. If it is possible to select the signal sources, one should be used having a low internal resistance during the pulse and a high resistance during the interval. There are 4 circuit diagrams, 6 graphs, and 5 references, 2 of which are American and 3 Soviet.

ASSOCIATION: Kafedra elektroniki Moskovskogo inzhenerno-fizicheskogo instituta (Chair of Electronics of the Moscow Institute of Physics Engineering)

SUBMITTED: June 18, 1958
Card 2/2

86797

S/142/60/000/003/012/017

E192/E482

9.25.20 (1020, 1150, 1154)

AUTHOR: Lebedev, V.I.

TITLE: Transistor Circuits With a High Input Impedance

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1960, No.3, pp.386-393

TEXT: First an emitter follower is considered. This is illustrated in Fig.1a. The input impedance of this system is given by

$$Z_{BX} = r_B + (1 + \beta) \cdot (r_E + R_{\text{ЭКБ}} \parallel x_c) \quad (1)$$

where β is the current gain of the transistor and

$$R_{\text{ЭКБ}} \parallel x_c = \frac{R_{\text{ЭКБ}} \cdot x_c}{R_{\text{ЭКБ}} + x_c} = \frac{R_{\text{ЭКБ}}}{1 + \beta \cdot R_{\text{ЭКБ}} \cdot C_H}$$

The equivalent resistance in this equation is given by

$$R_{\text{ЭКБ}} = \frac{R_E \cdot R_H}{R_E + R_H}$$

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Transistor Circuits With a High Input Impedance

where R_E is the resistance in the emitter of the circuit and R_H is the load resistance (see Fig.1a). If the base and the emitter resistances of the transistor are neglected, the equivalent input impedance can be expressed by Eq.(2), where τ_p is the effective life-time. At very low frequencies this expression can be written as Eq.(3). If the collector resistance r_k is taken into account, Eq.(3) can be written as Eq.(3a). From Eq.(3) it is seen that the input resistance can be of the order of hundreds of $k\Omega$. For a given transistor, the value of the input resistance is determined by the load resistance R_H . If it is necessary to use a low R_H it is advisable to employ the circuit of Fig.1, whose input resistance is independent of the load resistance. In practice, the input resistance of the circuit can be the value of half the collector resistance. From Eq.(3) it is also seen that the input resistance can be increased by increasing β . This can be achieved in compound emitter followers (Ref.2,3 and 4), such as shown in Fig.2. However, the input resistance of a simple emitter follower or a compound follower cannot be made higher than the

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Transistor Circuits With a High Input Impedance

collector resistance r_k unless a feedback circuit is introduced between the collector and the emitter (Ref.2,5 and 6) such as shown in Fig.3. The maximum input resistance of the circuit of Fig.3 is expressed by

$$R_{BX \max} = \frac{r_k}{1 - k_u} \quad (4)$$

where K_u is the voltage transfer factor of the device. In the case of a compound emitter follower (see Fig.2) it is possible to introduce a feedback capacitance in the manner illustrated by the dotted line. In this way it is possible to increase the input resistance to several M Ω . The frequency dependence of the input impedance of the emitter follower can be approximately represented by Eq.(5), while that of the compound emitter follower is given by Eq.(6). The dependence of the input impedance on frequency of a compound emitter follower for various values of the equivalent resistance $R_{\Sigma KB}$ is illustrated in Fig.4 and 5. The stability of

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Transistor Circuits With a High Input Impedance

the input resistance is primarily determined by the stability of the current gain β . This parameter is in turn dependent on the ambient temperature and the collector current I_k . The effect of various temperatures on the input impedance of a compound emitter follower is illustrated in Fig.5. The variation of the input impedance due to temperature changes for two different compound emitter followers is shown in Fig.6. The dependence of β on the emitter current is illustrated in Fig.7 for three different samples of the transistor type П14. The temperature stability of R_{BX} of a compound emitter follower is determined by the operating point of the system; R_{BX} can either increase or decrease with increasing temperature depending on the position of the operating point. Normally the emitter current of the first transistor should be greater than the operating collector current of the second transistor at the maximum operating temperature. At temperatures higher than 40°C, it is advisable to employ silicon transistors. There are 8 figures and 8 references: 2 Soviet and 6 non-Soviet.

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E192/E482

Transistor Circuits With a High Input Impedance

ASSOCIATION: Kafedra elektroniki Moskovskogo inzhenergo-
fizicheskogo instituta
(Department of Electronics of Moscow Engineering
Physics Institute)

SUBMITTED: November 17, 1959

Card 5/5

BELOUSOVA, N.V.; LEBEDEV, V.L.

Disruption in the tracking of an automatic frequency control
system. Radiotekhnika 18 no.10:35-42 0 '63. (MIRA 16:12)

1. Deystvitel'nyy chlen Nauchno-tehnicheskogo obshchestva
radiotekhniki i elektrosvyazi im. A.S.Popova.

ACCESSION NR: AP4024482

S/0142/64/007/001/0012/9020.

AUTHOR: Lebedev, V. I.

TITLE: Transistorized current stabilizers

SOURCE: IVUZ. Radiotekhnika, v. 7, no. 1, 1964, 12-20

TOPIC TAGS: current stabilizer, feedback stabilizer, reference diode stabilizer, pnp transistor stabilizer, differential stage stabilizer, adjustable output current stabilizer, current limit, internal resistance, stabilization coefficient

ABSTRACT: Three types of transistorized current stabilizers are described, and expressions are derived for the stabilization coefficient and for the internal resistance of each. One type uses a reference diode, the other a pnp transistor, and the third a differential amplifier stage. It is shown that transistorized current stabilizers are less expensive and more reliable than vacuum-tube stabilizers. The temperature instability of the load current is analyzed. The stabilizer circuit described can also be designed for a variable stable output current. The current limit is 10 amperes, the internal resistance limit is 1 megohm, and the maximum coefficient of stabilization is 100. The main difficulty

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ACCESSION NR: AP4024482

is to prevent the stabilized control amplifier from drifting, and can be eliminated using a transistor in the switching mode. Orig. art. has: 6 figures and 18 formulas.

ASSOCIATION: None.

SUBMITTED: 15Jan63

DATE ACQ: 15Apr64

ENCL: 02

SUB CODE: EE, SD

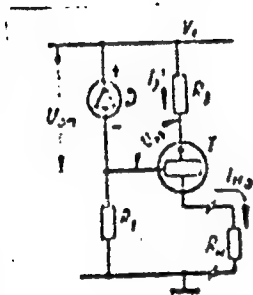
NR REF SOV: 003

OTHER: 002

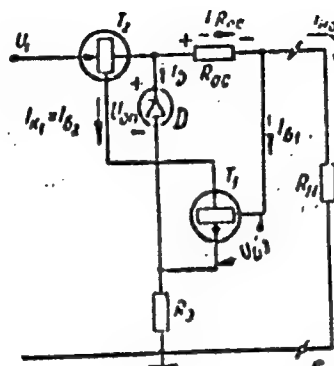
Card 2/4

ACCESSION NR: AP4024482

ENCLOSURE: 01



Simplest current stabilizer with reference diode

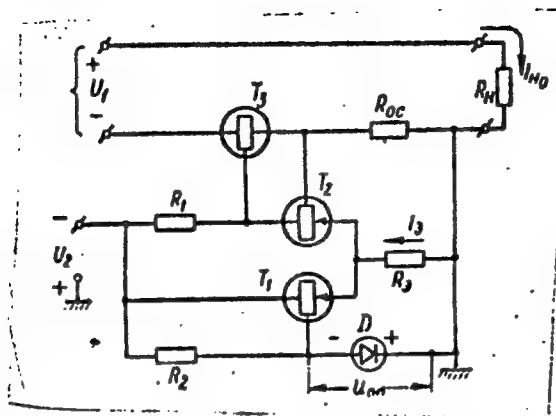


Current stabilizer with pnp transistor amplifier

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ACCESSION NR: AP4024482

ENCLOSURE: 02



Current stabilizer with amplifier
using a differential stage

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LEBEDEV, V.I.

Special features of transistor circuits in micromode operation.
Radiotekh. i elektron. 10 no.5:903-912 My '65. (MIRA 18:5)

L 60875-65

ACCESSION NR: AP5017671

EWT(1)/EWT(m)/EWP(t)/EEC(b)-2/EWP(b)/EWA(h) IJP(c) JD

UR/0109/65/010/007/1328/1334
621.374.325.4

AUTHOR: Lebedev, V. I.

TITLE: Silicon transistor flip-flop in the microregime

SOURCE: Radiotekhnika i elektronika, v. 10, no. 7, 1965, 1328-1334

TOPIC TAGS: flip flop, microminiaturization, bistable multivibrator, DTL flip flop

ABSTRACT: A diode transistor logic flip-flop is analyzed. The flip-flop consists of two P502 silicon transistors, 6 D223 Si diodes, and 6 resistors. Analysis and synthesis equations are derived for power consumption as a function of the transistor current gain $\beta(I_c)$, operating temperature range ΔT , bias supply variation tolerance δE_c , resistor tolerance δr , fan-out n , and degree of transistor saturation. It is shown that minimum power consumption should be no lower than 1 mW, below which flip-flop switching time increases sharply. The figure of merit $D = nF/P$ (where F is the operating frequency, n , the load capability and P , the power consumption) for the DTL is 10 times greater than that of the DCTL (direct-coupled transistor logic) flip-flop and four times greater than that of the current-switching mode. The results show that the DTL flip-flop consumes more power than a DCTL but in gen-

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ACCESSION NR: AP5017671

eral requires fewer transistors and has a higher fan-out. Hence, it is more suitable for microminiaturization. A working model designed with $\delta E_c = \pm 20\%$, $\delta r = \pm 20\%$, and $\Delta T = \pm 60^\circ\text{C}$ performed satisfactorily at a frequency of 200 kc, with power consumption of only 1 mw. Orig. art. has: 7 figures and 7 formulas. [BD]

ASSOCIATION: none

SUBMITTED: 11Apr64

ENCL: 00

SUB CODE: EC

NO REF SOV: 002

OTHER: 001

ATD PRESS: 4063

Card *2/2*

L 41630-66 FWT(d) LJP(c)

ACC NR: AP6011357

SOURCE CODE: UR/0208/66/006/002/0251/0275

AUTHOR: Lebedev, V. I. (Moscow)

ORG: none

TITLE: The ⁶method of characteristics for the solution of the kinetic equation

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 6, no. 2, 1966, 251-275

TOPIC TAGS: boundary value problem, difference equation, approximate solution ,
KINETIC EQUATION

ABSTRACT: Difference equations arising in the solution of the kinetic equation by the method of characteristics are studied. The difference equations introduced are free of the defects of former difference schemes in that they do not require repeated calculations of transcendental functions, are monotonic, and offer a good approximation of the difference operator to the differential operator. Difference equations are first adduced for the general case of the kinetic equation and then for the more difficult univariate case of an infinite cylinder. As far as possible, the difference schemes used are those employed in solving problems by the KR method (cf. V. I. Lebedev in *Chislennye metody resheniya zadach matem. fiz.*; "Nauka", Moscow, 1966). Experience with this method shows it to be practicable in solving problems for a reactor and for a cell having a complex medium distribution. The convergence of the KR method

UDC: 517.9:533.9

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L 41630-66

ACC NR: AP6011357

is studied, error estimates are obtained, and the cost of a "cheap" algorithm, is determined for the KR method in the case of the plane periodic problem. Orig. art. has: 160 formulas.

SUB CODE: 12,20/

SUBM DATE: 18Jun65/

ORIG REF: 015/

OTH REF: 003

Card 2/2 hs

ACC NR: AP6032936

SOURCE CODE: UR/0208/66/006/005/0895/0912

AUTHOR: Lebedev, V. I. (Moscow)

ORG: none

TITLE: Finding the solutions of kinetic problems

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 6, no. 5, 1966, 895-912

TOPIC TAGS: transport equation, Kinetic equation, periodic solution, iteration

ABSTRACT: To clarify the nature of the approximation of the solutions of difference problems to exact solutions, solutions are found for the kinetic equation pertaining to particle transport and written in self-adjoint form (cf. V. S. Vladimirov. Tr. Matem. in-ta AN SSSR, 1961, 11). Further, Case's findings (K. M. Case. Elementary Solutions of the Transport Equation and Their Applications. Ann. Phys., 1960, 9, 1-23) are extended to the q -variate case, and a fundamental solution is found for the m -group problem. A solution is also found for the m -group periodic problem. A variant of the iterative KP-method (V. I. Lebedev, Zh. vychisl. matem. i matem. fiz., 1966, 6, no. 2, 251-275) is applied to the solution of m -group problems. The

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UDC: 517.9:533.9

ACC NR: AP6032936

price of the KP-method for the periodic problem is determined. It is shown that the KP-method cannot be further refined. "The author is indebted to N. I. Laletin for stimulating discussion of the findings of Section 2." Orig. art. has: 84 formulas.

SUB CODE: 12 / SUBM DATE: 18Jan66/ ORIG REF: 015/ OTH REF: 005

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L 08725-67 EWT(d)/EWP(1) IJP(c) BB/GG
ACC NR: AP6033216 SOURCE CODE: UR/0142/66/009/004/0492/0496

AUTHOR: Arkhangel'skiy, A. Ya.; Lebedev, V. I.; Post, Yu. N. 44

ORG: none

TITLE: Register with silicon transistors in a microregime

SOURCE: IVUZ. Radiotekhnika, v. 9, no. 4, 1966, 492-496

TOPIC TAGS: computer memory, transistorized circuit, TRIGGER CIRCUIT

ABSTRACT: A low-power, solid-state dynamic register is described. The register (see Fig. 1.) uses P502 V transistors and D523 B diodes. MLT resistors R and R₁ are 30 and 100 kΩ, respectively. Each trigger uses about 1 mw of power; adjacent stages are coupled with diodes. The fan-out of the register is three (n = 3). A five-stage register was tested with n = 3 and 4. The lower limit of the clock oscillator pulse amplitude was raised (nominal amplitude is 8 v) for n = 4 at an operating temperature of 22C; it was further raised for a temperature of -60C. The operating temperature range of the register is -60C.

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UDC: 621.374.325.4:621.382.3

L 08725-67

ACC NR: AP6033216

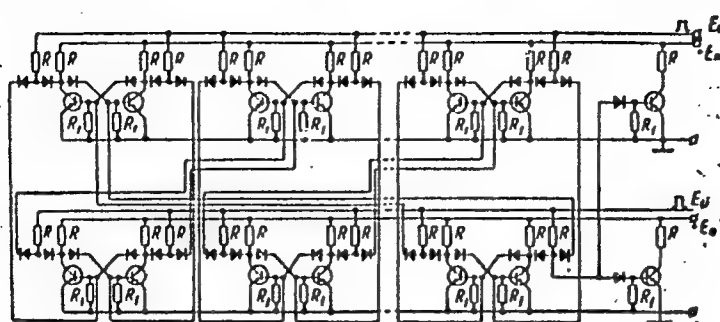


Fig. 1. Schematic diagram of an n-stage register

Resistor and supply voltage tolerances are $\pm 20\%$. The total power consumption of the register is 10 mw. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 09/ SUBM DATE: 23Nov64/ ORIG REF: 001/ OTH REF: 004

Card 2/2 nst

LEREDEV, V.I.

Effect of the degree of blackness of a medium on heat exchange
in a furnace chamber. Inzh.-fiz. zhur. no.12:81-85 D '60.

(MIRA 14:3)

1. Institut inzhenerov zheleznodorozhnogo transporta im. I.V.
Stalina, g. Moskva.

(Furnaces)

GORYAINOV, L.A., inzh.; KUMSKOV, V.T., kand.tekhn.nauk; LEBEDEV, V.I., inzh.

Studying the heat exchange in the furnace of a boiler by means
of a model and of the furnace itself. Trudy MIIT no.138:87-92
'61. (MIRA 14:12)

(Heat-Transmission)
(Furnaces-Testing)

S/196/62/000/015/003/008
E194/E155

AUTHOR: Lebedev, V.I.

TITLE: The influence of the degree of blackness of a furnace medium on heat exchange in combustion chambers

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.15, 1962, 11, abstract 15 G 61. (Tr. Mosk. in-ta inzh. zh.-d. transp., no.139, 1961, 90-101)

TEXT: The object of the work was to confirm experimentally that the temperature distribution of a furnace medium retains the same modelling conditions for various degrees of blackness. The test equipment and experimental procedure are described and illustrated. The degree of blackness of the furnace medium was altered by the addition of chromo-magnesite dust of constant grain size distribution. The test results are in the form of a graph of the relationship.

$T_2/T_{pot} = f(Re)$, $T_2/T_1 = f(Re)$ and $q_2/q_k = f(Re)$

for various concentrations of dust in the furnace medium, where:

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The influence of the degree of ...

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E194/E155

T_{pot} - the mean flow temperature; T_1 - the theoretical combustion temperature; T_2 - the gas temperature at discharge from the chamber; q_r and q_k - the specific thermal loadings of the heat-accepting surface, resulting from radiant and convective heat-transfer. The relationships obtained indicate that the modelling conditions of the temperature distribution in the chamber are unchanged and also that increasing concentration of dust in the furnace medium increases the absolute gas temperature in the discharge section of the chamber, i.e. heat transfer from the gas to the heat-accepting surface is reduced. The relationship $q_r/q_k = f(Re)$ is plotted from the test results obtained with air blowing, and indicates that as the absorption factor of the furnace medium increases the radiant component of the total heat transfer is reduced and the convective component increased. The results may be used to calculate total heat-transfer in cooled combustion chambers.
12 references.

[Abstractor's note: Complete translation.]

Card 2/2